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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/864,219	05/25/2001	Yukiharu Tagawa	740145-198	2762

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EXAMINER

PERRY, ANTHONY T

ART UNIT	PAPER NUMBER
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2879

DATE MAILED: 01/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/864,219

Applicant(s)

TAGAWA, YUKIHARU

Examiner

Anthony T Perry

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 28 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) 11-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 May 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

Applicant's arguments filed 10/28/03 have been fully considered and are persuasive.

Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection has been made.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sugitani (US 6,060,830) in view of Schuster (US 4,808,136).

Regarding claims 1 and 10, the Sugitani reference teaches a high pressure discharge lamp having a discharge space with a volume less than 80mm^3 (col. 4, lines 17-19) and an amount of halogen within the range of 1.7×10^{-4} and $6.7 \times 10^{-4} \mu\text{mol/mm}^3$ (col. 5, lines 9-13). Sugitani does not specifically state how the halogen is introduced into discharge vessel. However, one of ordinary skill in the art would realize that using the smallest generally available pellets weighing 20 grams would provide an excessive amount of halogen in such a discharge vessel.

Schuster teaches a method of manufacturing discharge lamps comprising the steps of providing a discharge vessel that defines a light emitting discharge space and introducing a predetermined amount of dosing material into the discharge space. Schuster teaches that the

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dosing material, in this case a minute quantity of mercury, is very difficult to introduce into the discharge vessel because the amount needed is so small. To remedy this problem and provide an accurate method of introducing such a dosing material into the discharge vessel, Schuster discloses a method involving heating an introduction carrier composed of a porous body containing the absorbed dosing material (see abstract and col. 2, line 66 – col. 3, line 7).

In the case of discharge lamp disclosed by Sugitani, a minute quantity of halogen is needed to be introduced into the discharge vessel. Since the smallest readily available metal halide pellets contain too much halogen, one of ordinary skill in the art at the time the invention was made would have found it obvious to use an introduction carrier composed of a porous body containing an absorbed metal halide and heating it in order to introduce the small amount of halogen (in the range of 1.7×10^{-4} and 6.7×10^{-4} $\mu\text{mol}/\text{mm}^3$) into the discharge vessel.

Regarding claim 7, Schuster teaches the halogen-introduction carrier is a porous body made of a high-melting point metal (see abstract).

Same reasoning for combination given in the rejection of claim 1 applies.

Regarding claims 8-9, Schuster teaches that the porous body is made of a metal with a melting point above 250 degrees Celsius but does not specifically state that the metal is tungsten. It has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. Thus, it would have been obvious to one having ordinary skills in the art at the time the invention was made to have used tungsten as the porous body, since the selection of known materials for a known purpose is within the skill of the art.

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With regards to the density of the tungsten porous body, it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. Thus, it would have been obvious to one of ordinary skills in the art at the time the invention was made to provide the porous tungsten body with an appropriate density, since optimization of workable ranges is considered within the skill of the art.

Claims 2-3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sugitani (US 6,060,830) in view of Schuster (US 4,808,136) as applied to claim 1 above, and further in view of Johnson (US 5,374,871).

Regarding claim 2, Schuster teaches that the dosing material-introduction carrier is located inside the discharge vessel. Schuster does not specifically state that the halogen-introduction carrier is heated from an outside source.

However, Johnson teaches using an outside source to heat a dosing material-introduction carrier so as to carry out reliable and fast dosing of the lamp with the desired precise quantity of the dosing material after the hermetic sealing of the lamp envelope (col. 2, lines 25-37).

Accordingly, one of ordinary skill in the art at the time of the invention would have found it obvious to heat the halogen-introduction taught by the combination of Sugitani and Schuster, by using an outside source so as to provide a reliable and fast dosing of the lamp with the desired precise quantity of dosing material (halogen) after the hermetic sealing of the lamp envelope.

Regarding claim 3, the aforementioned references do not specifically state the discharge vessel having a main tube and first and second elongated seal tube sections extending from

opposite ends of the main tube and having electrode bars positioned extending into the discharge space. However, discharge lamps of this structure are well known in the art.

The aforementioned references do not specifically teach the halogen-introduction carrier being secured to an electrode bar. However, it is noted that the applicant's specific location of the halogen-introduction carrier being secured to the electrode bar, does not solve any of the stated problems or yield any unexpected result that is not within the scope of the teachings applied. Therefore it is considered to be a matter of choice, which a person of ordinary skill in the art would have found obvious to select any location inside the discharge vessel for the halogen-introduction carrier as long as the carrier releases the halogen within the discharge vessel.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sugitani (US 6,060,830) in view of Schuster (US 4,808,136) as applied to claim 1 above, and further in view of van der Wolf et al. (US 3,957,328).

Regarding claim 4, Schuster does not specifically state the discharge vessel having a main tube and first and second elongated seal tube sections extending from opposite ends of the main tube and having electrode bars positioned extending into the discharge space. However, discharge lamps of this structure are well known in the art. Schuster teaches an auxiliary tube connected to the lamp in which the halogen-introduction carrier is disposed (col. 2, line 66 – col. 3, line 7). Schuster does not specifically state that the auxiliary tube is connected to an outer end of one of the seal tube sections or recovering the halogen-introduction carrier after having released the metal halide.

However, Fig. 10 of van der Wolf discloses a method of manufacturing discharge lamps wherein a dosing material-introduction carrier 3 is placed in an auxiliary tube 1 which is connected to the sealed tube section of the discharge vessel 10. Van der Wolf teaches that the dosing material-introduction carrier is recovered by removal of the auxiliary tube section after release of the mercury and sealing of the seal tube section to which the auxiliary tube is connected.

The recitation “for re-adsorption with a metal halide and subsequent reuse” has not been given patentable weight because it is considered an intended used recitation. It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations.

Van der Wolf does not specifically state that the carrier is extracted from the auxiliary tube for re-adsorption with a metal halide and subsequent reuse, however one of ordinary skill in the art would have found it obvious at the time of the invention to have extracted the carrier from the auxiliary tube after removal of the auxiliary tube so that the carrier could be used in the manufacturing of another discharge lamp.

Claims 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sugitani (US 6,060,830) in view of Schuster (US 4,808,136) as applied to claim 1 above, and further in view of Rothwell, Jr. (US 4,557,700).

Regarding claims 5-6, Schuster discloses the claimed invention except for the use of mercury bromide as the metal halide. Rothwell teaches that mercury bromide can be used to produce blue-green light (col. 3, lines 30-45). It has been held to be within the general skill of a

worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. Thus, it would have been obvious to one having ordinary skills in the art at the time the invention was made to have used mercury bromide as the metal halide, since the selection of known materials for a known purpose is within the skill of the art.

Response to Arguments

Applicant's arguments with respect to claims 1-10 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to *Anthony Perry* whose telephone number is (571) 272-2459. The examiner can normally be reached between the hours of 9:00AM to 5:30PM Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel, can be reached on (571) 272-2457. The fax phone number for this Group is (703) 872-9306.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [Anthony.perry@uspto.gov].

All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly

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set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.

ATP

Anthony Perry
Patent Examiner
Art Unit 2879
January 26, 2004

Sandra O'Shea
Supervisory Patent Examiner
Technology Center 2800

Sandra O'Shea